

Declass Review by NIMA / DoD

May 11, 1964

High Resolution Screen or
UV excited phosphor screen

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They have received the contract and have started work.

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██████████ is proceeding with the lens design which will give good color correction for both UV and visual light. His present approach is a catadioptric system in which the first two surfaces are first surface mirrors for the principal focusing, or image formation. Two low power quartz lenses are then used as corrector plates to remove residual spherical deficiencies without introducing any chromatic errors of importance. The magnification is 13:1 which enlarges a 70 mm format to fill a 30" by 30" screen. Before completing this design, ██████████ is reviewing the literature to see if there other possible approaches which would offer more.

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██████████ is proceeding with the organic phosphor work. He is planning to investigate Anthracene, Fluorene, Fluorcene, Rubrene, Diphenyl-cyclo-octatetraene, and Umbelliferone. These materials are on order in small sample lots and some of them have been received. The material is usually in powder or crystalline form and must be dissolved. He expects to suspend them in an acrylic resin, so he must first determine the proper solvent and then determine whether they will fluoresce in the resin.

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██████████ will do the inorganic coating investigations. He will use zinc sulfide, Zinc Silicate, and Cadmium Tungstate. These materials are on order. There is some competitive rivalry between ██████████ as to whether the organics or the inorganics will prove to be the suitable material.

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In order to get a fix on the life of the phosphors, they have had a sample of the material they were previously working with illuminated for several months. There has been no noticeable decay.

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5/11/ Monday

Some things I would like to discuss with you:

1. How did the proposal for work after 7/1/64 strike you? [redacted] had asked last March if we were going to incorporate. [redacted] I have been discussing this & I think we will.

2. Received a letter dated April 29 requesting I not work for [redacted] They consider my situation to be governed by employee regulations. Did you see that letter?

3. What happened to the Language Statistics proposal of [redacted] which I gave to [redacted]

4. [redacted] would like to find some new capabilities in microscopes & accessories. I contacted [redacted] in [redacted] who design optics. I visit them next week if you concur.

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